



## ***Construct Natural Gas Fueling Station in City of Banning***

**Contractor:** City of Banning

**Cosponsors:** Mobile Source Air Pollution Reduction Review Committee, City of Banning, Riverside County Transportation Department, Riverside County Transportation Commission, South Coast AQMD, Banning Unified School District

**Project Officer:** Larry Watkins

### **Background**

With the support of the South Coast AQMD, the City of Banning has completed a publicly accessible, fast-fill compressed natural gas (CNG) fueling station. The CNG station is located at 176 East Lincoln Street, just east of San Geronio Avenue, in Banning. There was previously a slow-fill station at that location which was replaced with 2 fast-fill CNG hoses, dispensing at either 3000 or 3600 psi. The facility is currently serving the compressed natural gas vehicles (NGVs) operated by the Banning Unified School District, Southern California Gas Company and the Army Corps of Engineers. This addition to public access CNG fueling infrastructure in this portion of the South Coast Air Basin also significantly improves the ability of private consumers to conveniently fuel clean, alternative fuel vehicles.

### **Project Objective**

The SCAQMD Technology Advancement Office provided the City of Banning \$140,000 to help offset the construction costs for the natural gas station. Pursuant to Contract 04085, The City of Banning shall operate the station for at least five (5) years after the first commencing to dispense fuel to fleets.

The facility fills an important gap in natural gas infrastructure in the region; provides more reliable service to Banning's existing CNG bus fleet; and allows for the cities of Banning, Beaumont and other local fleets to utilize clean burning CNG powered vehicles to meet their respective growing transportation demands.

### **Technology Description**

The City of Banning was an early pioneer in the deployment of compressed natural gas (CNG) vehicles

and developed a slow-fill CNG pump for the Banning transit and school system in 1995. Due to expanding demands on the station and significant improvements in both the station and vehicle technology, City of Banning decided to expand the local CNG infrastructure with the development of a new, state-of-the-art CNG fueling station.



Initially, Banning was planning the development a public access fast-fill CNG refueling station on a parcel of City-owned land on 22nd Street. However, because some of the grants for this project originated from federal CMAQ funds, the projected development timeline was too long to meet the needs of the City. To meet the Banning's and Beaumont's immediate CNG fueling demands, the City contracted for an analysis of the City's existing infrastructure and determined that it was more efficient to upgrade Banning's existing slow-fill CNG refueling infrastructure to provide the additional fueling capacity needed.

City of Banning released a competitive bid for the project, which was awarded to Allsup Corporation. The upgraded public-access CNG fueling station includes 36,000-scfm storage and twin 75 HP compressors. There is a single dual-hose dispenser capable of dispensing CNG at 3,000 psi. and 3,600 psi.

### **Status**

On September 28<sup>th</sup>, 2004 the City of Banning inaugurated a publicly accessible compressed natural gas (CNG) fueling station located at the City's Fleet Maintenance Yard at 176 East Lincoln Street. This

---

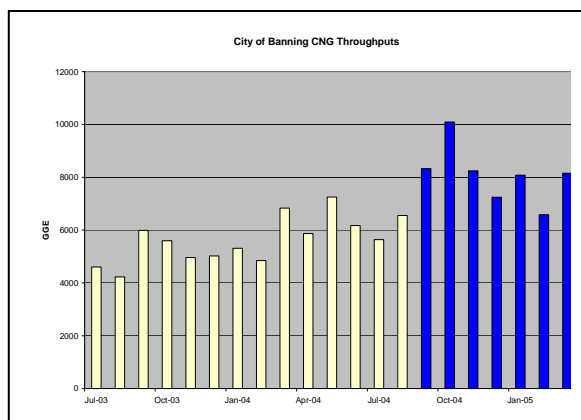
replaced an older slow-fill CNG station that required daily maintenance during each 24-hour period and was not publicly accessible.



### Results

Since the City of Banning started its initial operations on September 28, 2004, the impact on vehicle operation costs cannot be evaluated. Additionally, no emission results are available from the user fleet at this time, however the transition from a diesel fuel source to clean burning CNG shall result in substantial reductions in emissions from the current user fleet and any subsequent fleets.

The station throughputs since September 2004 have increased 42% over the prior 12-month period. Furthermore, now that the local fleets are assured that a reliable source of fast-fill CNG is available, it is anticipated that they will issue purchase orders to expand their existing CNG fleets. The facility is currently serving the compressed natural gas vehicles (NGVs) operated by the Banning Unified School District, Southern California Gas Company and the U.S. Army Corps of Engineers.



### Benefits

The City of Banning anticipates that the operation of this CNG fueling station will now allow for other local fleets to begin deploying CNG vehicles, thus even further reducing diesel consumption and harmful emissions within Eastern Riverside County.

The City of Banning is located near the intersection of Interstate 10 and California 60 freeways in Riverside County, which is the only eastern approach to the Los Angeles metropolitan area. Prior to the opening of this station, the nearest publicly accessible CNG stations were located 27 miles away in either direction, or a gap in public access, fast fill CNG fueling of more than 55 miles. This extreme gap made travel into and through the area by CNG-fueled refuse trucks, transit buses, utility trucks and other vehicles types very difficult and therefore unlikely. This refueling station closes an exiting gap and will serve as an important facility in our region's efforts to reduce our pollution.

### Project Costs

The final cost of the station was \$690,000, which was slightly more than the \$660,000 projected cost at the outset. The \$140,000 contribution of the SCAQMD Technology Office was matched by \$120,000 from the MSRC, \$150,000 from the Banning School District, \$130,000 from the City of Banning, \$100,000 from the Riverside County Transportation Department, and \$50,000 from the Riverside County Transportation Commission.

### Commercialization and Applications

The CNG station described herein is not a demonstration project. It is a fully operational and commercial alternative fueling station that has been built to accommodate future expansion for additional CNG fuel customers. City of Banning will continue ongoing discussions with other users' fleets, such as private fleets, refuse haulers and other governmental agencies complying with the SCAQMD's fleet rules.

No further work remains for the City of Banning to bring CNG product to market. Simple economics and location will drive additional fleet users to the site. Both the pricing (which includes no profit, since this site is operated by a governmental agency) and location (easily accessible via the nearby freeway systems and the industrially zoned area) should be sufficient for the City of Banning to persuade additional fleets to use the station.

Updated November 10, 2005